

ABSTRACT

The present invention provides magnetic structure, particularly an isolation transformer, which includes a shield to prevent radiation of electromagnetic interference ("EMI"). The magnetic structure includes a support structure, or bobbin, on which are mounted windings formed from electrical conductors. The windings are electrically connected to termination points, which provide the electrical interconnections for the magnetic structure. A magnetic core can be included in the support structure to provide optimal magnetic properties to the device. An EMI shield formed from a metallic foil such as copper is wrapped around the winding to prevent the radiation of EMI. The EMI shield is connected to a shield pin in the support structure by a conductive strap such that the shield pin is electrically connectable to a fixed potential through a safety rated capacitor to provide a low impedance path for currents induced in the EMI shield. The magnetic structure is particularly useful as an isolation transformer in an isolated power supply.

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